

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.-21. (Canceled).

22. (Currently amended) A method for determining private information and risk attitudes comprising:

accessing, from computer system memory, auction data from previously conducted auctions, wherein the auction data comprises bids submitted in utility-dependent auctions and bids submitted in utility-independent auctions, wherein the utility-dependent auctions comprise auctions in which bidding behavior depends on risk attitudes and the utility-independent auctions comprise auctions in which bidding behavior does not depend on risk attitudes;

determining private information using the bids submitted in the utility-independent auctions, ~~wherein the private information comprises valuations;~~ and

determining risk attitudes using the private information and the bids submitted in the utility-dependent auctions.

23. (Previously presented) The method of claim 22, wherein determining private information further comprises using statistical density estimation techniques to nonparametrically estimate a joint distribution of private information.

24. (Previously presented) The method of claim 22, wherein determining risk attitudes further comprises using quantile matching to nonparametrically estimate the risk attitudes.

25. (Previously presented) The method of claim 22, wherein the utility-independent auctions and the utility-dependent auctions further comprise auctions for a same type of item.

26. (Currently amended) A computer system comprising:
storage that contains auction data from previously conducted auctions, wherein the auction data comprises bids submitted in utility-dependent auctions and bids submitted in utility-independent auctions, wherein the utility-dependent auctions comprise auctions in which bidding behavior depends on risk attitudes and the utility-independent auctions comprise auctions in which bidding behavior does not depend on risk attitudes; and
a processor that can access the storage, wherein the processor determines private information using the bids submitted in utility-independent auctions, ~~wherein the private information comprises valuations,~~ and determines risk attitudes using the private information and the bids submitted in utility-dependent auctions.

27. (Previously presented) The computer system of claim 26, wherein the processor determines the private information using statistical density estimation techniques to nonparametrically estimate a joint distribution of the private information.

28. (Previously presented) The computer system of claim 26, wherein the processor determines risk attitudes using quantile matching to nonparametrically estimate the risk attitudes.

29. (Previously presented) The computer system of claim 26, wherein the utility-independent auctions and the utility-dependent auctions further comprise auctions for a same type of item.

30. (Currently amended) A storage medium storing instructions that, when executed by a processor, cause the processor to:

retrieve auction data from previously conducted auctions, wherein the auction data comprises bids submitted in utility-dependent auctions and bids submitted in utility-independent auctions;

estimate private information using the bids submitted in the utility-independent auctions; and

estimate risk attitudes based on the private information and the bids submitted in the utility-dependent auctions, wherein the utility-dependent auctions comprise auctions in which bidding behavior depends on risk attitudes, the utility-independent auctions comprise auctions in which bidding behavior does not depend on risk attitudes, and the private information comprises valuations.

31. (Previously presented) The storage medium of claim 30, wherein the instructions further cause the processor to apply statistical density estimation techniques to nonparametrically estimate the joint distribution of the private information.

32. (Previously presented) The storage medium of claim 30, wherein the instructions further cause the processor to apply quantile matching to nonparametrically estimate the risk attitudes.

33. (Previously presented) The storage medium of claim 30, wherein the utility-independent auctions and the utility-dependent auctions further comprise auctions for a same type of item.

34. (Currently amended) An auction design system, comprising:
a storage device containing an historical auction database comprising utility-dependent auction data for a plurality of utility-dependent auctions and utility-independent auction data for a plurality of utility-

independent auctions, wherein the plurality of utility-dependent auctions comprises auctions in which bidding behavior depends on risk attitudes of a first plurality of bidders and the plurality of utility-independent auctions comprises auctions in which bidding behavior does not depend on risk attitudes of a second plurality of bidders; and

means for determining market structure, wherein private information for the second plurality of bidders is determined using the utility-independent auction data, ~~the private information comprising valuations of the second plurality of bidders,~~ and risk attitudes for the first plurality of bidders is determined using the private information and the utility-dependent auction data.

35. (Previously presented) The auction design system of claim 34, wherein the means for determining market structure uses statistical density estimation techniques to nonparametrically estimate the joint distribution of the private information, and uses the joint distribution to nonparametrically estimate the risk attitudes.

36. (Previously presented) The auction design system of claim 34, further comprising:

means for predicting bidding behavior for an auction decision candidate using the private information and the risk attitudes.

37. (Previously presented) The auction design system of claim 36, wherein the storage device contains a bidding model database comprising auction bidding models; and

the means for predicting the bidding behavior further receives an auction decision candidate and constraints, selects a bidding model from the bidding model database using the auction decision candidate and

constraints, and applies the private information and the risk attitudes to the bidding model to predict the bidding behavior.

38. (Previously presented) The auction design system of claim 37, further comprising:

means for generating an evaluation of the auction decision candidate using the predicted bidding behavior, the private information, and the risk attitudes.

39. (Currently amended) A method for analyzing auction data comprising:

determining private information for a first plurality of bidders using utility-independent auction data stored in a computer system, the utility-independent auction data comprising auction data from a plurality of auctions in which bidding behavior does not depend on risk attitudes of the first plurality of bidders, ~~and the private information comprising valuations of the first plurality of bidders; and~~

determining risk attitudes for a second plurality of bidders using the private information and utility-dependent auction data stored in the computer system, the utility-dependent auction data comprising auction data from a plurality of auctions in which bidding behavior depends on the risk attitudes of the second plurality of bidders.

40. (Previously presented) The method of claim 39, wherein determining private information further comprises nonparametrically estimating the joint distribution of the private information; and determining risk attitudes further comprises nonparametrically estimating the risk attitudes using the joint distribution.

41. (Previously presented) The method of claim 39, wherein the plurality of auctions in which bidding behavior depends on the risk attitudes and the plurality

of auctions in which bidding behavior does not depend on the risk attitudes further comprise auctions for a same type of item.

42. (Currently amended) A method for analyzing auction data comprising:
- accessing utility-independent auction data and utility-dependent auction data from an auction database, wherein the utility-independent auction data comprises data from auctions in which bidding behavior does not depend on risk attitudes and the utility-dependent auction data comprises data from auctions in which bidding behavior depends on risk attitudes;
 - determining a joint distribution function that represents private information of a first plurality of bidders using the utility-independent auction data, ~~wherein the private information comprises valuations of the first plurality of bidders;~~ and
 - determining a utility of wealth function of a second plurality of bidders using the joint distribution function and the utility-dependent auction data.

43. (Previously presented) The method of claim 42, wherein the auctions in which bidding behavior depends on risk attitudes and the auctions in which bidding behavior does not depend on risk attitudes further comprise auctions of a same type of item.

44. (Previously presented) The method of claim 42, wherein determining a joint distribution function further comprises using statistical density estimation techniques to nonparametrically estimate the joint distribution of the private information.

45. (New) The method of claim 22, wherein accessing, from computer system memory, auction data further comprises accumulating the auction data into sets as a function of auction type, a first auction type being utility-dependent and a second auction type being utility-independent.

46. (New) The computer system of claim 26, wherein the processor is further configured to accumulate the auction data into sets as a function of auction type, a first auction type being utility-dependent and a second auction type being utility-independent.

47. (New) The storage medium of claim 30, wherein the instructions further cause the processor to accumulate the auction data into sets as a function of auction type, a first auction type being utility-dependent and a second auction type being utility-independent.